The theoretical perspective of materialism, which asserts that mechanical processes alone can account for all observed empirical data, is dictated by ideas about the natural world that, although very widely believed in Western scientific culture, have been known to be fundamentally incorrect for more eighty years. In contrast, contemporary quantum physical theory brings directly and irreducibly into the causal dynamics certain psychologically described choices made by human agents about how they will act. This key development is applicable to neuroscience, and it provides neurologists and psychiatrists with an alternative conceptual framework for describing neural processes and how they relate to and interact with the differing cultural contexts in which all human brains operate. The current crisis in Western cultures has increased many people’s awareness of the need for new approaches which both allow an active role for consciousness in medical practice and provide a scientific basis for the use of directed focused attention in the amelioration and treatment of disease states. Recent research on the effects on cerebral activity of mindful awareness, a specific readily teachable mental action common to a variety of cultural and religious belief systems, will be discussed in this context.